International Trade Data System Office

Information Technology Architecture/Design Report

Project Implementation and Transition Plan for the International Trade Data System

September 1998

ITDS Office
Washington, D.C.

Executive Summary

The automated trade system proposed for the International Trade Data System (ITDS) will involve many players. In the 104 identified US trade-related government agencies, there are thousands of US Government analysts and inspectors who are likely to become involved. The number of trade users is estimated at 300,000 at more than 400 ports of entry or inspection sites [known as Federal Inspection Sites (FIS)]. All of this is to be coordinated by a complex system of new software and administrative procedures developed and managed by the ITDS Office in partnership with participating Federal agencies and trade users.

Implementing and transitioning to ITDS will require a number of strategic decisions and actions to occur. One is obtaining funding; another is to eliminate redundant efforts within the trade-related agencies through interagency agreements and memoranda of understanding. The ITDS Office must be staffed with additional analysts, developers and programmers, as well as operational and support staff. A further action is to acquire and prepare facilities, including the host computer site and office. Ports of entry will need surveying, and some modifications may result in order to accommodate ITDS. Government staff at the ports must be provided training, as well as those at agency headquarters. Finally, support must be provided to the trade community for them to develop their software to interface with the ITDS using the standard data set.

The *Project Implementation and Transition Plan* (Plan) of the *Information Technology Architecture*/*Design Report* outlines a development and deployment schedule for ITDS starting in 1998 and ending by October 2003. The Plan proposes phasing in the ITDS starting at land-border Federal Inspections Sites where proof of concept has already been established by the North American Trade Automation Prototype (NATAP), thus minimizing the initial start-up costs and risks. This Plan also recognizes that the system functionality to meet the requirements of 104 agencies will have to be phased in over the deployment cycle. The initial system will not provide full functionality for ITDS. However, to ease the transition for the trade community from its existing environment to ITDS, the system will support all modes of transport when it begins operation. To support the trade community, the ITDS Office has developed a strategy for outreach to the trade community (see Section 6 for details).

Project Implementation and Transition Plan

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1. Introduction

The *Project Implementation and Transition Plan*[1] (Plan) is part of Volume 3: Implementation and Maintenance of the *Information Technology Architecture/Design Report* (ITA/Design Report). The Plan addresses implementation and transition issues ranging from the composition of a phase to customer service plans. It is designed to incorporate future development efforts by the ITDS Office. At this time, it is an illustration of the planned methodology for implementing and transitioning from the current trade processing systems used throughout the US Government to the International Trade Data System (ITDS).

Table 1-1, ITDS Key Implementation Milestones, presents preliminary milestones and dates for ITDS implementation. The project is dependent on the critical path actions found in milestones 3 and 5. If these scheduled dates are not met, other activities will be delayed. For example, if funding is not available until October 1999, a schedule evaluation would be required to determine the impact on the scheduled deployment (see *Risk Management Plan*).

Table 1-1. ITDS Key Implementation Milestones

Milestone	Action	Scheduled Data
1	Start Phase One Development	July 1998
2	Acquire Development Hardware	July 1998
3	Obtain Funding	October 1998
4	Start Phase One Training	October 1998
5	Gain Approval of ITA/Design Report	December 1998
6	Acquire and Install Operational Hardware	December 1998
7	Develop Baseline Requirements for Phase One	January 1999
8	Start Development for Future Phases	October 1999
9	Full Functionality in ITDS (Phase Three)	October 2002
10	Full Deployment of ITDS (Phase Five)	October 2005

[1] The Identification Number of the *Project Implementation and Transition Plan* is SED30. This number is assigned as part of configuration management and used for internal purposes.

The plan is organized into six sections and two appendices.

- *Section 1—Introduction*. Presents the purpose and scope of the Plan.
- *Section 2—Implementation Approach*. Contains the proposed methodology to implement ITDS within the time and resource constraints.
- *Section 3—Deployment*. Presents the selection process for determining the contents of an implementation phase.
- *Section 4—System Development*. Includes management tools and development tasks for ITDS and user groups.
- *Section 5—User Support*. Includes systems acceptance testing, customer service and training.
- *Section 6—Outreach to the Trade Community*. Outlines the plan to inform as many members of the trade community as possible during initial ITDS phases.
- *Appendix A*. Contains detailed tables listing the contents of the proposed phases.
- *Appendix B*. Trade Groups on Record with ITDS.

2. Implementation Approach

A phase is a conceptual and management view of the implementation. Each phase for the proposed ITDS takes into account four major components. They are the determining factors in the deployment strategy. The components are:

- Federal Inspection Sites (FISs)
- Agencies
- Trade Community
- Functions.

Additional features of each phase are 1) date of complete transition of a site to ITDS, 2) system administration, and 3) percent of total transactions per phase. Appendix A: ITDS Implementation Phase, contains detailed tables listing the contents of each component per phase. A description of each component is provided below.

Federal Inspection Sites Component. This component incorporates all trade-related agencies and corresponding port of entry and inspection sites for all modes of transport (truck, rail, sea, air). Factored into the phasing is the training required for the affected personnel for each agency.

Agency Component. To date, 104 agencies have been identified and categorized according to the functionality described in the Functions Component below.

Trade Community Component. This component is made up of importers, exporters, brokers, carriers, as well as the public estimated at 300,000 companies active in the trade process. Existing US Customs Service Automated Commercial System (ACS) trade users—of which there are approximately 2,000--will be impacted to the extent that they may have to have two interfaces until ITDS is fully deployed. If a broker (i.e., trade user) transacts business at a single location, it is possible that the move to ITDS will not require parallel interfaces. Large brokers who transact business at more than one FIS will require two interfaces. The two interfaces are the current Automated Broker Interface (ABI) and the ITDS interface, which is EDIFACT-compliant and implements the ITDS standard data set.

Functions Component. This component includes system functions as described in the *Concept and Recommendations for an International Trade Data System* (IT06 Report), May 1995 written by the IT06 Task Force, which comprised 53 participating Federal agencies. The system functions are Border Operations; Licensing and Permitting; Statistics, Analysis and Policy; and Trade Promotion. Trade Promotion will be handled outside this implementation approach.

Deployment of ITDS will be done on a site-by-site basis. This incremental approach keeps the universe of users small in the early stages providing the ITDS Office, as well as the government and trade users, the opportunity to refine the system during implementation. Management approval for the start of each phase is dependent on the Government Information Technology Services (GITS) Board according to Executive Order 13011. All agencies impacted by the deployment of ITDS will be a partner in developing and implementing the functionality needed to support mission requirements.

3. Deployment

This section describes the selection process for each component of ITDS deployment (i.e., Phase One and future phases).

3.1 Selection of Federal Inspection Sites

The process for preparing sites will begin when a multi-agency team of experts conducts a site survey. In addition to assessing the needs of each site, the survey team will identify agency-specific requirements regarding hardware and communications, including network connectivity. Results from the survey will be produced in an FIS-specific deployment plan. Upon approval by involved agencies, site preparation will commence and may consist of purchasing and installing hardware, data communication circuits, developing a port-specific training plan (see the *Training Plan* for details), working with the trade entities to assist in their transition, and ensuring that site procedures are in place for all agencies. Coordination will occur with all necessary authorities, including the General Services Administration who manages the majority of ports for required facility modifications.

3.1.1 Phase One

Phase One will include a sampling of all modes of transport (truck, rail, air, sea) beginning with the truck mode. The feasibility of a standard data set for truck and rail transactions was proven in NATAP. NATAP border sites are well prepared for the ITDS concept. The ITDS Office will be able to work with the necessary trade entities to resolve and refine technical and functional issues.

Funding to initiate development of ITDS in FY 1999 was proposed. The schedule presented below is contingent on the additional resources and will require adjustment at other resource levels.

Buffalo and Laredo land-border sites are scheduled for deployment in fall 1999. These two sites are scheduled several months before other Phase One sites to allow for the development and

testing of as many functions of the new system as possible in a manageable environment. These locations already have NATAP experience; therefore, the burden on learning the new system is lessened. These ports also provide the greatest number of transactions at a single port on the northern and southern borders of the US. The other sites (Los Angeles, Otay Mesa, and Detroit) slated for the latter part of Phase One were selected because they are regionally diverse and have co-located air and sea sites. Tables 3-1 and 3-2 contain the selected sites for Phase One. Sites for future phases are in Tables 3-3 through 3-5.

Table 3-1. Phase One Sites: Initial

Site
Buffalo, NY (truck)
Laredo, TX (truck)

Scheduled Date of Initial Operation: Fall 1999.

Table 3-2. Phase One Sites: Additional

Site
Los Angeles, CA (air and sea)
Otay Mesa, CA (truck)
Detroit, MI (truck)

Scheduled Date of Initial Operation: April 2000.

3.1.2 Future Phases

Table 3-1. Phase Two Sites

Site
Nogales, AZ (truck)
El Paso, TX (truck)
Blaine, WA
Port Huron, MI
Miami, FL (sea and air)
New York, NY (JFK air)
Newark, NJ (sea)

Scheduled Date of Initial Operation: July 2001.

Table 3-2. Phase Three Sites

Site	Scheduled Date of Initial Operation

Site	Scheduled Date of Initial Operation
Champlain-Rousse Point, NY (service area)	January 2002
Cleveland, OH (service area)	February 2002
New Orleans, LA (service area)	March 2002
Chicago, IL (service area)	April 2002
San Francisco, CA (service area)	May 2002
Blaine, WA (service area)	June 2002
Pemlina, ND (service area)	July 2002
Anchorage, AK (service area)	August 2002
St. Albans, VT (service area)	September 2002
Boston, MA (service area)	October 2002

Table 3-3. Phases Four and Five Sites

Site	Scheduled Date of Initial Operation
Remaining Non-ITDS Equipped FISs	2003

3.2 Selection of Agency Participants

3.2.1 Phase One

Table 3-6 contains those agencies selected to participate in Phase One. Collectively, these agencies have several roles in ITDS. These roles include maintenance of reference files, provision of risk assessment criteria to run in ITDS, interfacing with ITDS, and aggregation and distribution of data stored in the ITDS data warehouse.

Table 3-1. Phase One Agencies

Agency
Animal Plant Health Inspection Service
Army Corps of Engineers
Bureau of Alcohol, Tobacco and Firearms
Bureau of the Census
Bureau of Transportation Statistics
Environmental Protection Agency
Federal Aviation Administration
Federal Highway Administration
Fish and Wildlife Service
Food and Drug Administration
Food Safety and Inspection Service
Immigration and Naturalization Service
Internal Revenue Service
International Trade Administration
International Trade Commission
National Highway Traffic Safety Administration
US Coast Guard
US Customs Service

3.2.2 Future Phases

During Phase Two (April 2000 to July2001) the ITDS Office will expand from the number of agencies to include additional operational agencies without a border presence. Table 3-7 lists agencies with operational responsibilities that will be studied for integration with ITDS.

Table 3-7. Phase Two Agencies

Agency
Agricultural Marketing Service
Bureau of Export Administration
Bureau of Political and Military Affairs
Centers for Disease Control and Prevention
Congressional Research Service
Consumer Product Safety Commission
Export-Import Bank of the United States
Federal Communications Commission
Federal Trade Commission
Foreign Agricultural Service
Federal Grain Inspection Service
Federal Railroad Administration
Forest Service
Office of the US Trade Representative
Research and Special Programs Administration
US Maritime Administration

During Phase Three, scheduled to begin July 2001 and conclude October 2002, the ITDS Office will continue to work with agencies that participated during Phase One and Phase Two. By the end of Phase Three, it is expected that all trade-related agencies will be participating in ITDS. This is necessary for full functionality.

3.3 Selection of Trade Participants

Members of the trade community interfacing to ITDS will not be required to resubmit entries through another US Government system, such as US Customs Service's Automated Commercial System (ACS), for the sites where ITDS is implemented. Trade participation will remain voluntary for the first 15 months after the introduction of ITDS at each site. After that time, ITDS will become the primary communication path for international trade data used at that site.

The *Cost/Benefit Analysis* describes the relationship between the number of Federal Inspection Sites in each phase and the expanding volume of trade transactions processed by ITDS. Transitioning a majority of the trade into the new system will be facilitated by the fact that a

small number of trade users (i.e., brokers) at a port often constitute the majority of the transactions. In fact, the national top 15 filers represent 57% of the entries received by ACS.[2]

3.4 Selection of Functions

In order to measure progress against the functionality described in the IT06 Report (i.e., Border Operations, Licensing and Permitting, Statistics, Analysis and Policy, Trade Promotion), the project staff evaluated the user functions presented in the *Concept of Operations*. Rough estimates were made against the functionality to provide a general sense of progress.

3.4.1 Phase One

Table 3-8 presents the preliminary estimates of the percent of functionality proposed for each phase. At this writing, these estimates are *only a guide*. Estimates will be updated for each phase.

Table 3-8. Phase One: Functionality

Functionality	Estimated Functionality
Border Operations	80%
Licensing and Permitting	20%
Statistics, Analysis and Policy	10%
Trade Promotion	0%

3.4.2 Future Phases

By the close of Phase Three in October 2002, ITDS expects to have developed and be operating with full functionality.

Table 3-9. Phase Two: Functionality

Functionality	Estimated Functionality
Border Operations	100%
Licensing and Permitting	50%
Statistics, Analysis and Policy	25%
Trade Promotion	10%

[2] Based on first and second quarter ACS filings of Fiscal Year 1997, obtained from the US Customs Service.

Table 3-10. Phase Three: Functionality

Functionality	Estimated Functionality
Border Operations	100%
Licensing and Permitting	100%
Statistics, Analysis and Policy	100%
Trade Promotion	100%

4. System Development

This section is divided into two subsections: management, covering the Work Breakdown Structure (WBS), document tree, development model, prototype development and the interface requirements; and development tasks by responsibility units (e.g., ITDS Office, Federal agency, and trade community).

4.1 Management

Several mechanisms for management during the system development process are important to the success of ITDS. Among them is the WBS that graphically details the functional areas of the development process from project management to support engineering. The Document Tree displays the major documents needed to support the ITDS Project and includes time phasing of the document generation.

Also included is a discussion of the various automated management tools such as the Dynamic Object-Oriented Requirements (DOORS™) software used by the ITDS Office for managing changes to the ITA/Design Report once it is baselined. This tool will allow the ITDS Office the flexibility to filter, sort and trace requirements according to a variety of criteria, such as deployment phase or Federal agency. It also provides a catalogued chronology of changes (i.e., audit trail) that have taken place. Planned structures include user feedback, performance measures, and capacity planning.

4.1.1 Work Breakdown Structure

The ITDS Project uses the WBS to support planning, control and communications throughout the project. Figure 4-1 contains the WBS at the second-tier level. The WBS supports program and technical planning; description of major program elements; cost estimation; budget formulation; schedule definition; progress status reporting; and tracking of technical changes. The high-level WBS contains the following functional areas and its corresponding number scheme:

- 100 Project Management
- 200 Application Development

- 300 Support Engineering
- 400 External Responsibilities.

Project Management (series 100) includes project management functions such as planning and control, resources, management reviews, quality assurance, configuration management, requirements management, project analysis, and the information technology architecture, as well as project evaluation and performance measurements. With these controls in place, ITDS will be able to progress and evaluate the system as it is developed and deployed.

Application Development (series 200) includes the user/functional requirements identification and analysis, system requirements definition, and the concept of operations. Of particular importance are the interface and communication requirements for the large number of ITDS users both in government and the trade community. This WBS also contains the systems-level analysis and design and software development.

Support Engineering (series 300) includes the areas of testing, logistics, deployment, and training.

External Responsibilities (series 400) includes the external efforts associated with the integration of the agencies and trade into ITDS.

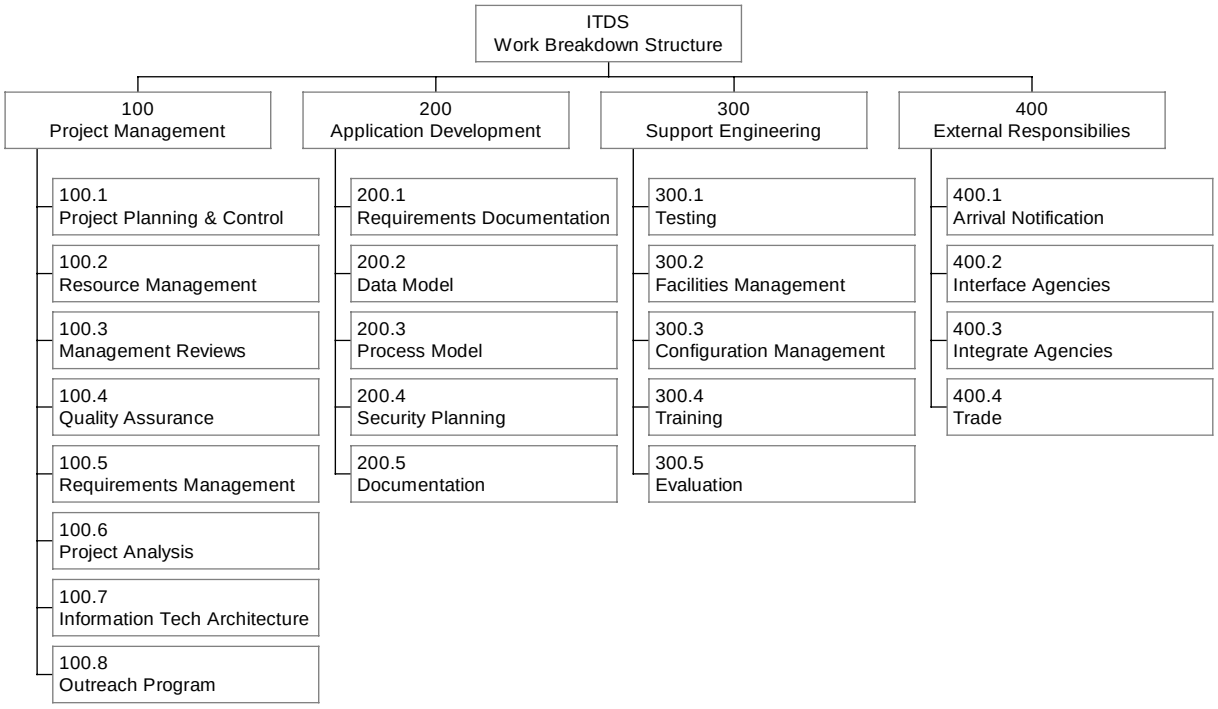

Figure 4-1. Work Breakdown Structure

4.1.2 Documentation Tree

The ITDS Document Tree in Figure 4-2 presents the major documents needed to support the ITDS Project. The top level includes the review packages highlighting the work accomplished during each phase of the project. These status reports result in guidance from project management and the ITDS Board of Directors.

The Document Tree categorizes the documents into five major areas: Project Management, System Engineering and Design, Integration and Testing, Quality Assurance, and Support Engineering. This presents a clear picture of which ITDS Project support organization is responsible for generating each document.

The time phasing of the document generation is shown by the shape located at the lower right corner of each document block. The 11 boxes with crosses in the lower right-hand corner represent those documents included in the ITA/Design Report. Note that many of the documents are to be used internally within the ITDS Office to support the design, implementation and operations.

ITDS Project Document Tree

Project Definition (PD)

Concepts & Rqmts for an International Trade Data System (IT06) PD10

Project Document Tree PD20

Technical Decision Points (TD)

- System Requirements Review Package TD10
- Preliminary Design Review Package TD20
- Critical Design Review Package TD30
- Test Readiness Review Package TD40
- System Test Review Package TD50
- Operational Readiness Review Package TD60

Project Management (PM)

- Project Summary PM00
- Project Management Plan PM10
  - Monthly Project Status Reports PM10.1
- Project Admin'n & Long-Term Strategy Doc. PM11
- Master Project PERT Schedule PM20
  - Near-Term GANTT Schedule PM20.1
- Configuration Management Plan PM30
  - Configuration Status/Accounting Reports PM30.1
- Risk Management Plan PM40
  - Monthly Risk Assessment Reports PM40.1
- Program Management Metrics PM50
- Regulatory Analysis Plan PM60
  - Regulatory Analysis Report PM60.1

System Engineering and Design (SED)

- User Profiles SED10
- System Requirements Document SED11
  - System Detailed Design Specification SED11.1
  - Sub-System Detailed Design Specification SED11.2
- Project Implementation & Transition Plan SED30
- System Implementation Plan SED31
- Installation Procedures SED32
- Interface Requirements Document SED50
  - Interface Detailed Design Specification SED50.
- Concept of Operations SED20
  - Data Model SED20.1
  - Data Flow Diagram SED20.2
- User/Functional Requirements SED21
- Technical Reference Model SED22
  - Standards Profiles SED22.1
- Technology Infrastructure SED23
- Design Development Plan SED40
- Data Standardization SED60
- DataBase Description Document SED61
- Software Version Description SED62
- Security Plan SED70
  - Security Risk Assessment SED70.1
- Cost-Benefit Analysis PM70
- ITA Management Plan PM80
  - Compliance, Waivers & Certifications PM80.1
  - Glossary PM80.2
  - Abbreviations & Acronyms PM80.3

Integration and Tesing (I&T)

- Performance Verification Plan I&T10
- Testability Analysis Plan I&T20
  - Testability Analysis Report I&T20.1
- Unit Test Plan I&T30
  - Unit Test Procedures I&T30.1
- Integration Test Plan I&T40
  - Integration Test Procedures I&T40.1
- System Test Plan I&T50
  - System Test Procedures I&T50.1
- Acceptance Test Plan I&T60
  - Acceptance Test Procedures I&T60.1
- Weekly Test Discrepancy Reports I&T70
- Final Test Reports I&T80

Quality Assurance (QA)

- Quality Assurance Plan QA10
- Requirements Analysis Audits QA20
- Quality Metrics Plan QA30
- Process Evaluation Plan QA40
- Code Audits QA50
- Problem Reporting and Corrective Action Reports QA60
- Functional Configuration Audit Plan QA70
  - Functional Configuration Audit Report QA70.1
- Physical Configuration Audit Plan QA80
  - Physical Configuration Audit Report QA80.1

Support Engineering (SE)

- Support Engineering Analysis & Trade SE10
  - Integrated Logistics Plan SE10.1
- Training and Simulation Plan SE20
  - Training Materials SE20.1
- System Operator Manual SE30
- End User Manual SE31

Parent / Child

Precedent / Antecedent

Review Effort
Planning Definition Effort
Design Effort
Formal Test Effort
Implementation Effort
Installation Effort
Covering Multiple Efforts

Included in ITA
Scheduled After ITA

4.1.3 Development Model

Complementing these management tools is the model chosen to support the development. The project staff reviewed a variety of development models to select one that best depicts the relationships of the project functions, activities and tasks to the milestones, baselines, reviews, and flow of work products. Where requirements are dynamic, as they are for ITDS, a flexible development life cycle is necessary. In addition, a flexible life cycle allows inclusion of emerging technology. For the development of the system, the ITDS Office chose the Spiral Development Model[3] (see Figure 4-3).

4.1.3.1 Use of the Development Model

The spiral model is a series of cycles with each cycle indicating the passage of time and the increase cost or use of resources. Key players are central to the success of this model. While the players can and do change, they include the people and organizations most important for the overall system. These include government staff, supplemented by agency detailees with subject matter expertise. Management approval for the start of each phase is dependent on the Government Information Technology Services (GITS) Board as required in Executive Order 13011.

A description of ITDS implementation of the spiral mode is provided in Figure 4-3, Full Development Life Cycle. The description of the quadrants is based on Figure 4-3.

Upper Left Quadrant. Each cycle begins in the upper left quadrant where the key players perform the following:

- Identify Functions to be Developed
- Establish Functional Requirements
- Establish Performance Objectives

[3] Dr. Barry W. Boehm first formulated the Spiral Development Model life cycle in the mid-1980s.

- Analyze Development Alternatives
- Identify Constraints (e.g., cost, schedule, and security restrictions)
- Review Alternatives to Developing the Functionality in house (e.g., reuse or Commercial-Off-The-Shelf [COTS]) software.

Upper Right Quadrant. The next step, shown as the upper right quadrant, indicates the evaluation of alternatives against the stated objectives as well as their requirements and constraints. This discussion highlights areas of uncertainty that can present a significant source of risk. The risk management cycle begins with a determination of objectives and stakeholders; followed by risk identification, analysis, review; evaluation of mitigating strategies; plan for mitigation and actual mitigation. With risk management, ITDS can avoid some of the disasters common to large-scale development projects, such as product delivery delays, project budget overruns, discontinued projects, product performance shortfalls, unused or hard-to-use products. The *Risk Management Plan* provides a list of currently identified risks, and the system used by ITDS to identify and mitigate future risks.

*Lower Right Quadrant***.** The next step, shown by the lower right quadrant, focuses on the development and certification of the current level product.

*Lower Left Quadrant***.** The next step, shown by the lower left quadrant, is where the planning for the next phase takes place.

The spiral model consists of several complete cycles of these four quadrants. The significance of each is explained as follows. The first cycle or loop involved the NATAP phase, which was recently completed. The second cycle or loop of the spiral is Phase One and the development of core processes. It is important to have a solid design of core processes since they will provide the foundation for ITDS. The third cycle is the Phase Two operational system. It will be tested extensively. The outer cycle is Phase Three and marks the fully functional operational system. Note that this is a preliminary analysis of the development process and is subject to change.

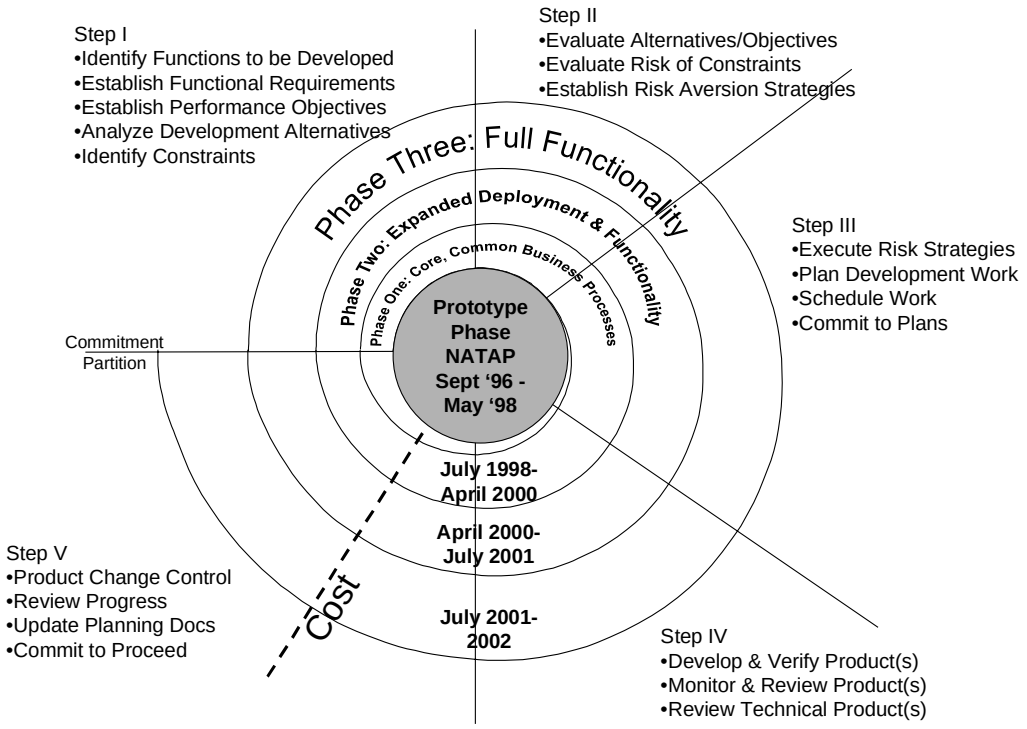

Figure 4-3. Full Development Life Cycle

With this development model, each phase can be at a different stage of development. For example, Phase One can be in operation while Phase Two is undergoing acceptance testing and training. Furthermore, Phase Three can be in development at the same time.

4.1.4 Prototype Development

The ITDS Office used rapid prototyping to develop NATAP. This technique helped users in both the Government and trade community to understand the features of the system, as well as provide a forum for discussion and resolution of issues. Prototyping is an integral part of the ITDS approach to software development and is introduced in the spiral model following a thorough design review, and acceptance by the user. A complete risk analysis and mitigation assessment will follow.

4.1.5 Interface Requirements

ITDS must integrate a variety of hardware and software products into workable solutions. The system and subsystems operate with components of other systems. As a result, the ITDS Office recognizes the importance of interface requirements and will identify them separately in the *Interface Requirements Document* (forthcoming). All computer-to-computer interfaces for trade and government agencies will undergo rigorous testing and certification to ensure functional software compatibility. Baseline test scripts will be maintained for regression testing whenever new functionality is implemented.

4.1.6 Transition Strategy

ITDS will move from development to operation in three stages as described below. The transition strategy allows the ITDS Office to combine expertise developed in Washington, D.C. with proven operational experience at the FIS. This will move ITDS toward a position of operational readiness and support the international trade community. The staged process uses standard systems engineering practices tailored to the international environment.

Stage One. The first stage involves preparing for the transition by putting equipment, staff and logistics into place at each deployment site. Prior to bringing up a site, the ITDS staff will perform a final verification of functionality of the installed equipment against test specifications. Status and connectivity of system components will be determined by using system monitoring tools, and actual component testing.

Stage Two. The second stage is the execution of the Operational Readiness Exercises (ORE). These exercises are controlled testing procedures to ensure all components of ITDS, including trade and government interfaces, are fully tested and operational. During this stage, operational guidelines and procedures will also be tested and certified.

Stage Three. The third stage is the Operational Readiness Review (ORR). Taking the results of the ORE (stage two), FISs will be reviewed collectively to ensure that the system is ready for operations. The objective is to structure all transition preparation activities (development/

integration/testing/operations rehearsals) to meet the operations readiness needs of ITDS FISs and the central management authority.

Stage Four. The fourth stage is User Acceptance. After the systems have been turned over to the users, a follow-up survey will be issued. Users will be asked to certify that all requirements and design objectives have been met.

Advantages of Transition Strategy

This checkout and installation strategy has several distinct advantages:

- The current operational mode remains stable until an explicit decision is taken to replace it
- Any change to the operational mode, including bug fixes, can be fully tested in the ITDS certification and testing environment before it is promoted to the operational system
- System certification can be performed in a dedicated mode and isolated from ongoing operations and new deliveries, yet be readily synchronized with new version deliveries when the new versions are ready for installation
- Personnel training can be accommodated in modes other than those needed for ongoing operations
- User involvement and acceptance is assured.

4.2 Development Tasks for ITDS Office and User Groups

The ITDS development tasks are divided among ITDS Office, trade-related government agency users, and trade community users. These divisions highlight the scheduling and coordination requirements for ITDS. This section focuses on the tasks related to each of these three organizational units.

4.2.1 Tasks for ITDS Office

4.2.1.1 Requirements

While each trade-related agency is ultimately responsible for defining its requirements, the ITDS Project staff will provide assistance. Design meetings to resolve technical details regarding interfaces and functionality are planned with the government and trade users. These meetings will permit the completion of the profiles for each agency and trade user group. Profiles are the means by which the ITDS Office gathers specific requirements. During the detailed system design and programming specification phase, agencies should be prepared to provide ITDS with subject matter specialists for a sufficient amount of time to resolve technical questions regarding their specific requirements.

4.2.1.2 Design and Development

The ITDS Office will begin software development by building the system infrastructure necessary to support the core system functions. Functions include reference files, trade interfaces, security controls, arrival notification, data management and agency interfaces. In conjunction with the development process, the ITDS Office will provide support to trade users to assist them in their development and testing of computer functionality.

As part of Phase One, the ITDS Office will build the processes necessary to monitor the border cargo release activities. In addition, ITDS will provide statistical and analytical capabilities for statistics and policy agencies. Capabilities will be developed to allow agencies to add criteria to ITDS for targeting entries (i.e., cargo) for examination. Functionality will be included to enable recording of events related to the release of cargo, as ITDS will maintain a status of each agency's cargo examination. Trade users will be provided with release notices and disposition instructions.

Data dissemination methods will be studied. The current method of treating requests for early access to data on an individual basis does not operate well, owing to the length of time taken to clear and respond to requests. The ITDS Office will also study options to enhance the existing

website. This website will contain or direct users to import and export trade data on an aggregated basis, with the possibility of public access on a user fee basis.

The section of the WBS in Figure 4-4 displays the functional areas of Application Development. Within this functional area is the Process Model. The 17 divisions under the Process Model constitute the focus areas for development.

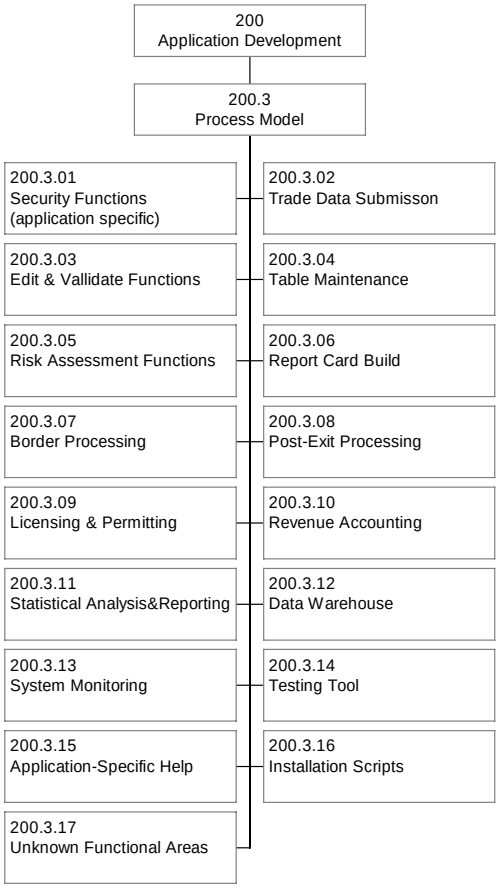

Figure 4-4. Selected Work Breakdown Structure: Process Model

4.2.2 Tasks for Trade-Related Federal Agency Users

Risk assessment is the evaluation of goods, conveyances and crew members to determine if they will be admitted to the United States (for imports) or released from the United States (for exports). Risk assessment for ITDS involves both a set of rules and functionality. Risk assessment rules are the criteria determined by the Federal agencies for how to perform risk assessment on the imports and exports for which the agency has regulatory authority. The rules

can be based on random sampling of all cargo, criteria-based sampling, algorithm-based sampling, or some combination of the three. Each Federal agency will always determine their own risk assessment rules; ITDS will never determine an agency's risk assessment rules. The functionality refers to the process of applying an agency's risk assessment rules to imports and exports. Risk assessment functionality can be supported either by the agency's internal system or ITDS. Each Federal agency will need to choose if they want to continue to perform risk assessment on its internal system or allow ITDS to perform it.

Each agency must define its functional requirements in coordination with the ITDS Office. As discussed above, agencies with inspection responsibilities will have the option of using the risk assessment features of ITDS or using their own systems and developing the necessary computer-to-computer interfaces to ITDS. Modifications to agency systems will likely be necessary to create interface programs using ITDS data. For those agencies choosing to solely use the services of ITDS, functions will be developed to provide agency personnel with the following features: 1) add and manage their own selectivity criteria; 2) query and view declaration data; 3) place holds on a declaration; and 4) correspond with the importer, exporter, broker or carrier regarding the status of results of cargo examination and the disposition of cargo.

ITDS will interface with existing internal, or legacy systems, used by the Phase One agencies identified in Section 3.2.1. ITDS will provide as much of the currently collected trade data as is feasible, thus minimizing the impact of the interface on agencies' mission-critical operations. In those instances where 100% mapping of data is determined to be impractical, mutually agreed upon interface alternatives will be explored and necessary changes identified.

4.2.3 Tasks for Trade Community Users

Trade users will be required to provide the ITDS standard data in the United Nations Electronic Data Interchange for Accounting, Commerce and Trade (UN/EDIFACT) set. Some system modifications may be required to fulfill this requirement. The Dun and Bradstreet Unique Numbering System (DUNS) number will be required to comprise the name and address fields in the declaration. An International Transaction Number (ITN) will also be required. The ITN is

the unique identifier for the transaction and not a currently provided data element. Trade users will be expected to be able to receive all outputs coming from ITDS in the UN/EDIFACT message syntax. Trade users should also be able to respond to disposition instructions from each agency. ITDS will provide two-way messaging capability for information on imports and exports and other correspondence to the trade users. For the collection process to become part of ITDS, very close cooperation and scheduling must occur between the trade users and ITDS to be sure that the system work is done in unison. As the legal record holder, ITDS will maintain a log of all entries submitting or modifying data to the transaction record.

5. User Support

5.1 Systems Acceptance Testing

System acceptance testing will be done to certify all system components, both singularly and as an integrated unit, to ensure that the work of the programming staff meets the requirements outlined by the users. A dedicated staff, separate from the system developers, will perform this function. Agencies must sign off that requirements have been tested and meet their requirements, which are documented in the given agency profile.

The trade users of ITDS who chose to have computer-to-computer interfaces must also undergo a certification process to ensure that their interface software meets the requirements for ITDS. Test scripts will be developed for each trade user group. Before customers are certified they must demonstrate successful and accurate completion of the various functional features. Once certified and operational, occasional problems will arise requiring the assistance of an ITDS expert to resolve. The ITDS Office plans to take advantage of experienced representatives (i.e., detailees) from various agencies to round out its planned Customer Service Center/Help Desk.

For a detailed discussion of ORE testing, see the Transition Strategy in Section 4.1.6 of this Plan.

5.2 Customer Service

ITDS intends to provide world-class Customer Service. Customers will be able to obtain help 7 days a week, 24 hours a day. User calls will be logged and tracked as open support request by age. The problems will be elevated to individuals with increasingly more knowledge and responsibility. No call for assistance will be left open. Assistance will be provided to a broad range of ITDS users. Service will be provided by agency representatives assigned to resolve agency-specific issues. The intent is to provide personnel who possess the knowledge needed to solve problems or to otherwise provide assistance. The entire scope of ITDS will be covered by the service, including all processes and operations.

5.3 Training

Training will be provided immediately before initial site deployment with training updates provided, as needed, in conjunction with subsequent incremental deliveries. Participants at each site in all deployment activities are expected to augment formal training activities. The ITDS operational activities are centered on the deployed FIS. This requires coordination of the ITDS deliveries, testing, and training through and after the operational readiness review. The *Training Plan* outlines how ITDS will ensure efficient and effective training for all user groups. The training population is comprised of seven broad segments: Government executives, trade executives; Government agency end-users; Government inspectors, trade community filers; Government end-system operators and system integrators. Training for the large trade community will follow a "train-the-trainer" approach. Training will be provided to selected trade personnel who, in turn, will be responsible for training their respective organizations.

6. Outreach to the Trade Community

6.1 Trade Outreach Effort

The ITDS Office will, as part of its design and development efforts, strive to inform and receive feedback from the trade community. In addition to the user profiles, ITDS is preparing, in cooperation with the trade community, focus groups and orientation sessions to introduce the trade community to the ITDS concepts (data, technology and processes). Participation in the first phase of ITDS will be voluntary, so these outreach sessions will be important to achieve buy-in from the private sector to the new filing and border-crossing processes.[4]

Follow-up to the outreach will consist of the trade community training efforts described in the *Training Plan*. This document presents the ITDS Office's plan for marketing ITDS to the trade community and receiving design input from these users prior to and during the initial operational phases of ITDS.

6.2 Outreach Approach

The ITDS Office will make every attempt to reach as many members of the trade community as possible during the initial ITDS phases. To this end, the ITDS Office will employ a variety of tools and methods to communicate with the trade community. The following is the preliminary approach the ITDS Office will follow; however, as opportunities present themselves for further outreach, this approach will necessarily be enhanced.

- *Identify Trade Groups.* The ITDS Office will identify trade groups for specific orientation and focus group sessions. A list of trade groups, as provided by the Federal agencies, is attached (Appendix B). The list includes trade lawyers and consultants. Currently, ITDS has 320 trade groups on record.

[4] Previous versions of the ITA/Design Report limited the scope of ITDS trade outreach to the acceptance of standardized data. That scope has been expanded.

- *Mail Information Packets.* ITDS will prepare a package of material for each of the trade groups identified by the Federal agencies regarding ITDS and its upcoming events.
- *Develop Formal ITDS Presentation.* A formal presentation "kit" on ITDS will be developed, utilizing a graphical presentation (i.e., "PowerPoint" and electronic demonstration of ITDS). The Chairman of the ITDS Board of Directors and/or the Director of the ITDS Office will serve as the chief spokesperson for ITDS before the trade community.
- *Conduct General "Town Hall" Meetings.* The ITDS Office will utilize the *Federal Register,* the provisions of the Advisor Committee Act, and other vehicles to announce the sponsorship of interactive "town hall" meetings. In order to accommodate the trade community, these meetings will be held at strategic sites throughout the continental United States. Possible sites of these meetings include:
  - East Coast – New York, Boston, Washington, DC
  - West Coast – Los Angeles, San Francisco, Seattle
  - West/Midwest – Denver, Detroit
  - Southern – Miami (Florida)
- *Conduct "Tailored" Fora/Briefings.* The ITDS Office will, after the initial town hall meetings, hold additional meetings specifically tailored to accommodate each segment of the trade (i.e., land, sea, air, and rail). Locations for these meetings will be determined based on the mode of transportation (i.e., Otay Mesa hosts a truck forum).
- *Participate at National Trade Meetings.* The ITDS Office will determine the schedules of all trade group and US Government meetings and conferences upcoming for 1998 for possible participation (i.e., invitation to speak about ITDS). The ITDS Office will assure that the schedules received are representative of the entire trade community-at-large.
- *Record and Evaluate Trade Feedback.* Information gathered through meetings with the trade community will be documented and incorporated into the trade community *User Profiles*.
- *Follow-on.* In addition to training for initial ITDS users, the names and contact information for all trade community members who attended the above sessions will be

recorded in the ITDS user database. Notices for all future local events will be sent to these people and regular contact will be maintained by the ITDS Office.

- *Maintain ITDS Webpage.* Current information, applications for participation, and technical interface specifications will be provided on the ITDS webpage for all trade community members to access free-of-charge.

Appendix A

ITDS Implementation Phases

Appendix A: ITDS Implementation Phases

Phase Component	*Phase One Fall 1999 – April 2000*	*Phase Two April 2000 – July 2001*
FEDERAL INSPECTION SITES (FIS)	Laredo, TX Buffalo, NY Detroit, MI Los Angeles, CA Otay Mesa, CA	Nogales, AZ El Paso, TX Blaine, WA Port Huron, MI Miami, FL New York, NY (JFK) Newark, NJ (sea)

Phase Component	*Phase One Fall 1999 – April 2000*	*Phase Two April 2000 –July 2001*
AGENCIES	Animal Plant and Health Inspection Service Army Corps of Engineers Bureau of Alcohol, Tobacco and Firearms Bureau of the Census Bureau of Transportation Statistics Environmental Protection Agency Federal Aviation Agency Federal Highway Administration Fish and Wildlife Service Food and Drug Administration Food Safety and Inspection Service Internal Revenue Service International Trade Administration International Trade Commission National Highway Traffic Safety Administration US Coast Guard US Customs Service	Agricultural Marketing Service Bureau of Export Administration Bureau of Political and Military Affairs Centers for Disease Control and Prevention Congressional Research Service Consumer Product Safety Commission Export-Import Bank of the United States Federal Communications Commission Federal Trade Commission Foreign Agricultural Service Federal Grain Inspection Service Federal Railroad Administration Forest Service Office of the US Trade Representative Research and Special Programs Administration US Maritime Administration

Phase	*Phase One*	*Phase Two*

Component	*Fall 1999 – April 2000*	*April 2000 – July 2001*
TRADE PARTICI-PANTS	Voluntary for first 15 months at location of FIS.	Voluntary for first 15 months at location of FIS.

Phase Component	*Phase One Fall 1999 – April 2000*	*Phase Two April 2000 –July 2001*
FUNCTIONS	Border Operations: 90% Licensing and Permitting: 50% Statistics, Analysis and Policy: 25%	Border Operations: 90% Licensing and Permitting: 50% Statistics, Analysis and Policy: 50%

Phase Component	*Phase One Fall 1999 – April 2000*	*Phase Two April 2000 – July 2001*
PERCENT OF TOTAL TRANSAC-TIONS (by FIS)	7%	25%

Appendix B

Trade Groups on Record with ITDS

Appendix B - Trade Groups on Record with ITDS

Adhesive and Sealant Relations
Air Freight Association
Air Transport Association of America
Aircraft Industries Association
Alaska Seafood Marketing Institute
Almond Board of California
American Academy of Nurse Practitioners
American Academy of Physician Assistants
American Apparel Manufacturers Association
American Association of Exporters & Importers, Inc.
American Association of Motor Vehicle Administrators (AAMVA)
American Association of Nurse Anesthetists
American Association of Port Authorities
American Association of Railroads
American Association of Shippers
American Association of State Highway
American Association of State Highway and Transportation Officials (AASHTO)
American Automobile Association
American Brandy Association
American Bus Association
American Contractors Indemnity Company
American Dairy Products Institute
American Dental Association
American Electronic Association
American Exporters and Importers Association
American Fibers Manufacturers
American Fireworks Standards Laboratory (AFSL)
American Food Processors Association
American Forest Products and Paper Association
American Gas Association (AGA)
American Herbalists Guild
American Horticultural Marketing Council
American Import Shippers Association
American Indian Trade & Development
American Institute for International Steel
American Iron and Steel Institute
American Managed Care Pharmacy Association
American Marketing Service (AMS)
American Medical Association
American Nurses Association
American Osteopathic Association
American Pharmaceutical Association
American Planning Association: Transportation Planning Division

American Podiatric Medical Association
American Public Transit Association
American Public Works Association
American Quarter Horse Association
American Road and Transportation Builders Association
American Russian Trade Center
American Seafood Institute
American Seed Trade Association
American Sheep Industry Association
American Society of Consultant Pharmacists
American Society of Hospital Pharmacists
American Society of Transportation and Logistics
American Soybean Association
American Soybean Association
American Spice Trade Association Inc.
American Standards and Testing Materials
American Textile Manufacturers Institute
American Trucking Association
American Trucking Associations
American Veterinary Medical Association
American Wind Energy Association
American Yarn Spinners Association
Appaloosa Horse Club
Asian Food Trade Association
Asparagus USA
Association of American Publishers
Association of American Railroads
Association of Food Industries, Inc.
Association of Foreign Trade Representatives
Association of Smoked Fish Processors, Inc.
Belgian Endive Marketing Board, Inc.
California Agricultural Export Council
California Avocado Commission
California Cling Peach Advisory Board
California Fisheries & Seafood Institute
California Kiwifruit Commission
California Pistachio Commission
California Prune Board
California Strawberry Commission
California Table Grape Commission
California Tomato Board
California Tree Fruit Agreement
California Walnut Commission
Carpet and Rug Institute
Catfish Institute

Cheese Importers Association of America, Inc.
Chemical Manufacturers Association
Cherry Marketing Institute
Chevron
Chocolate Manufacturers Association
Clean Coal Coalition
Cocoa Merchants' Association of America
Colombian Government Trade Bureau
Commercial Consul, Peoples Republic of China
Commercial Vehicle Safety Alliance
Congressional Fire Services Institute
Containerization and Intermodal Institute
Copper and Brass Fabricators Council
Cosmetic, Toiletry and Fragrance Association
Cotton Council International
Council of Growing Companies
Council of Logistics Management
Crandall Consulting
D.C. Council for International Business
Director of Trade Relations, German Agricultural Marketing Board
DTN
Eastern US Agricultural and Food Export Council
Economic Consulting Services, Inc.
Economics Resource Group
Electric Power Research Institute
Electronic Industries Association (EIA)
Eno Transportation Foundation
Fishking Processors Inc.
Florida Department of Citrus
Fresh Produce Association of the Americas
Gas Research Institute
Generic Pharmaceutical Industry Association
Georgetown Economic Services
Ginseng Board of Wisconsin
Global Trade Council
Green Coffee Association
Group Of Four
Honey Board
Hop Growers of America
IBM
IBP, Inc. International Division #24
IDS
Independent Laboratory Distributors Association
Indian Health Service Safe Home Coalition
Industrial Fabrics Association

Information Resources
INFORUM
Institute for International Economics
Institute of Electrical Engineers
Institute of Shortening & Edible Oil
Institute of Transportation Engineers
Institutional Furniture Manufacturers Association (BIFMA)
Intermodal Association of North America
International Apple Institute
International Business and Economic Research Corporation
International Communications Industries Assoc.
International Consumer Product Safety and Health Organization
International Dairy Foods Association
International Franchise Assoc.
International Ports and Harbors Association
International Road Federation
International Standards Organization
International Trade Data Users (ITDU), Inc.
International Trade Facilitation Council
Irvine Analytical
ITS America
Jojoba Cooperative Association
Juvenile Products Manufacturers Association (JPMA)
Kentucky Distillers Association
Knoll Pharmaceutical
Law & Economics Consulting Group
Leather Industries of America
Livestock Exporters Association
Logic International
Mardx Diagnostics, Inc.
Marine Products Export Development Authority, Government of India
Meat Import Council of America (MICA)
Mid-America International Agri-Trade Council
Millers National Federation
Mohair Council of America
MRB Group
Mushroom Council
NAFTA Ventures
National Association for Energy Service Companies
National Association of Animal Breeders
National Association of Boards of Pharmacy
National Association of Chain Drug Stores
National Association of Chemical Distributors
National Association of Counties
National Association of Manufacturers (NAM)

National Association of Pharmaceutical Manufacturers
National Association of Rail Shippers
National Association of Regional Councils
National Association of Retail Druggists
National Association of Solvent Recyclers
National Association of State Controlled Substances Authorities
National Association of State Department of Agriculture
National Association of State Development Agencies
National Association of Swine Records
National Association of Women Business Owners
National Bio-energy Industries Association
National Broiler Council
National Cotton Council of America
National Cottonseed Products Association
National Council of Federal Grain Inspection Locals
National Council on International Trade Development
National Council on Patient Information and Education
National Customs Brokers and Forwarders Association of America, Inc.
National Dry Bean Council
National Electrical Manufacturers Association
National Electrical Safety Foundation
National Federation of Independent Business (NFIB)
National Fire Prevention Association
National Fisheries Institute, Inc.
National Food Processors Association
National Foreign Trade Council
National Geothermal Energy Association
National Governor's Association
National Grain and Feed Association
National Hay Association
National Hydropower Association
National Industrial Transportation League
National Knitwear and Sportswear Association
National League of Cities
National Milk Producers Federation
National Mining Association
National Paint and Coatings Association
National Peanut Council
National Petroleum Refiners Association
National Pork Producers Council
National Potato Promotion Board
National Private Truck Council
National Sunflower Association
National Turkey Federation
National Watermelon Promotion Board

National Wholesale Druggists Association
NCITD
New York State Council of Hospital Pharmacists
North American Export Grain Association
Northern Border Brokers Association
Northern Textile Association
Northwest Horticultural Council
NY Wine and Grape Foundation
O'Neill & Whitaker, Inc.
Oregon Seed Council
Oregon-Washington-California Pear Bureau
Organization For Economic Cooperation And Development (OECD)
Oriental Food Association
Oriental Herbal Association
Pacific Association Of Tax Administrators (PATA)
Pacific Giant
Pacific Northwest Wine Production Coalition
Papaya Administrative Committee
Penick Corporation
Pfizer, Inc.
Pharmaceutical associations
Pharmaceutical Manufacturers Association
Port of Oakland
Portland Cement Association
Poultry and Egg Export Council
Produce Marketing Association
Protein Grain Products International
Raisin Administrative Committee
Renewable Fuels Association
Small Business Exporters Assoc.
Small Business Foundation of America
Society for International Affairs
Solar Energy Industries Association
South American Meat Council
Southern Border Brokers Association
Southern United States Trade Association
Switzerland Cheese Association
Synthetic Organic Chemical Manufacturers Association
Tea Association of USA, Inc.
Texas Produce Export Association
Textile Analysts Group
Textile and Apparel Data Users Group
The Agriculture Ocean Transportation Coalition
The Coca Cola Company
The National Cotton Council

The Pet Food Institute
The Popcorn Institute
Tile Council of America, Inc.
Tobacco Loan Association
Trade Boards: Spice, Cheese, Coconut, etc.
Trade Resources Co.
Transportation Research Forum
US Meat Export Federation
US Association of Importers of Textiles and Apparel
US Beef Breeds Council
US Chamber of Commerce
US Council for International Trade
US Dairy Export Council
US Egg Marketers, Inc.
US Energy Association
US Export Council for Renewable Energy
US Feed Grains Council
US Fire Administration
US Hide, Skin and Leather Association
US Livestock Genetics Exp
US Meat Export Federation
US Mink Export Development Council
US South Africa Trade Association
US Surimi Commission
US Tuna Foundation
US Wheat Associates
Underwriters Laboratories
Union Carbide Chemicals and Plastics
Union of Needletrades, Industrial and Textiles and Apparel
United Cold Storage
United Egg Producers
United Fresh Fruit and Vegetable Association
United Grain Corporation
Urban and Regional Information Systems Association
Urban Institute
Urban Land Institute
USA Dry Pea & Lentil Council
USA Fresh Sweet Cherry Promotion
USA Poultry & Egg Export Council
USA Rice Council
Vodka Producers of America
Voluntary Standards Organization
Washington State Apple Commission
Western Highway Institute
Western United States Agricultural Trade Association

William A Flegenheimer Co.
Wine Institute
Wool Bureau
World Trade Centers Association

Project Implementation and Transition Plan

Change Control Information Page

This document is under the configuration management of the ITDS Office Configuration Control Board (CCB). Proposed changes to this document shall be submitted to the ITDS Office CCB, along with supportive material justifying the change. Changes to this document shall be made by Document Change Notice (DCN) or by complete revision.

Questions concerning this document and proposed changes shall be mailed to:

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Changes Page

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